

IN THE CLAIMS

In accordance with the Examiner's requirement, Applicants provisionally elect the following claims for examination. Where needed, Applicants have also indicated provisional amendments to claim dependencies with respect to the elected claims.

1. Apparatus for conveying ice in the form of a plurality of pieces each having
2 physical characteristics amenable to transport by negative air pressure pneumatic
conveyance, from a source of said ice to a remote location under said negative air
4 pressure, which comprises:

a hollow elongated ice conduit connecting said source of ice and said remote
6 location and providing ice communication therebetween;

a receptor at said remote location for receiving said ice; and

8 a vacuum pump in fluid communication through a vacuum line with said
receptor for withdrawing air from said conduit and creating a vacuum comprising
10 said negative air pressure in said conduit, said negative air pressure causing said
ice to traverse said conduit from said source into said receptor.

11. Apparatus as in Claim 1 wherein said receptor at said remote location
2 comprises an accumulator having therein an openable gate for release therefrom
at said remote location of accumulated pieces of ice conveyed thereto from said
4 source.

39. Apparatus as in Claim 1 or 11 further comprising said vacuum line
2 connecting in fluid communication into said hollow conduit at a first point of
connection upstream of a second point of connection of said hollow conduit into
4 said receptor, and spaced apart from said second point of connection by an interval
not greater than a distance that said ice pieces can traverse under momentum
6 imparted to them by their prior conveyance by said negative air pressure, such that
diversion of at least a portion of conveying force of said negative air pressure at said

8 first point of connection does not prevent said ice pieces from continuing to traverse
entirely through said hollow conduit and into said receptor.

59. (Provisionally amended) Apparatus as in Claim 11 [or 46] further
2 comprising said receptor being disposed adjacent to an inlet of a subsequent
conduit leading to a subsequent accumulator at another remote location, and said
4 pieces of ice released from said receptor being deposited into said inlet for
conveyance through said subsequent conduit to said subsequent accumulator at
6 said another remote location.

65. Apparatus as in Claim 1 or 11 further comprising a collector into which ice
2 pieces delivered from said source of ice are received, said collector having a first
opening into said first conduit, and further comprising unbridging means associated
4 with said collector for presenting said released ice pieces individually and unbridged
to said first opening, whereby said ice pieces pass through said first opening into
6 said first conduit.

72. Apparatus as in Claim 1 or 11 further comprising sensor means for detecting
2 the presence or absence of ice in said receptor.

77. (Provisionally amended) Apparatus as in Claim 1 or 11 comprising a
2 plurality of said receptors or said ice sources and said conduit having an
intermediate division point from which a plurality of branch conduits extend, each
4 branch conduit leading directly or through at least one intermediate further division
point from which a subsequent plurality of further branch conduits extend, to an ice
6 communication connection with a respective one of said plurality of receptors or ice
sources.

97. Apparatus as in Claim 1 or 11 further comprising cleaner introducing means
2 for introducing a liquid cleaner into said ice conduit and conveying said liquid
cleaner through said ice conduit under said negative air pressure, whereby passage
4 of said cleaner through said ice conduit cleans contaminants from the interior of
said conduit, and upon discharge of said cleaner at an outlet of said conduit,
6 removes from said conduit said contaminants entrained in said cleaner.

102. Apparatus as in Claim 1 wherein said receptor at said remote location
2 comprises an air lock device which is connected to said ice conduit on an upstream
side and which has an inlet for pressurized air from a source thereof on a
4 downstream side and another conduit extending from said downstream side for
passage of said pressurized air, such that ice entering said air lock device from said
6 ice conduit passes through said air lock device and propelled through said another
conduit at high velocity by said pressurized air.

105. (Provisionally amended) Apparatus as in Claim [104] 102 wherein said
2 directing means comprises manual, mechanical, pneumatic or electrical positioning
of said outlet end of said flexible tubing.

126. A process for conveying ice in the form of a plurality of pieces each having
2 physical characteristics amenable to transport by negative air pressure pneumatic
conveyance, from a source of said ice to a remote location under said negative air
4 pressure, which comprises:

a. providing a hollow elongated ice conduit connecting said source of ice and
6 said remote location and providing ice communication therebetween; a receptor at
said remote location for receiving said ice; and a vacuum pump in fluid
8 communication through a vacuum line with said receptor for withdrawing air from
said conduit and creating a vacuum comprising said negative air pressure in said
10 conduit, said negative air pressure causing said ice to traverse said conduit from

said source into said receptor;

- 12 b. withdrawing air from said receptor and conduit and creating a vacuum comprising said negative air pressure in said receptor and conduit; and
- 14 c. causing said ice to traverse said conduit from said source into said receptor under the influence of said negative air pressure.

128. (Provisionally amended) A process as in Claim [127] 126 where said
2 receptor comprises an accumulator, said process further comprising

- a. providing an openable gate in said accumulator at said remote location;
- 4 b. causing pieces of ice conveyed into said accumulator through said conduit by said vacuum to come to rest bearing upon said gate, said gate being biased
6 against opening; and
- c. releasing of accumulated pieces of ice conveyed from said source from said
8 accumulator at said remote location by counteracting or eliminating such biasing.

138. A process as in Claim 126 further comprising

- 2 a. connecting said vacuum line in fluid communication into said ice conduit at a first point of connection upstream of a second point of connection of said ice
4 conduit into said receptor, and spaced apart from said second point of connection by an interval not greater than a distance that said ice pieces can traverse under
6 momentum imparted to them by their prior conveyance through said conduit by said negative air pressure; and
- 8 b. conveying said ice pieces under that amount of force of said negative air pressure at said first point of connection sufficient to cause said ice pieces to
10 continue to traverse entirely through said first conduit and into said receptor without diversion of any ice pieces into said first vacuum line.

145. A process as in Claim 126 wherein said receptor comprises an ice dispenser
2 and further comprising detecting the presence of ice in said ice dispenser.